

In the Claims:

1. (Currently Amended) Process for producing a light metal foam body, comprising the steps of:

producing a gas-containing metal melt from light metal pressure die cast scrap that has been melted under atmospheric pressure so as to thereby introduce gas into the fluid light metal without blowing gases into the melt or using blowing agents;

then bringing the gas-containing metal melt into a mold;

allowing the gas-containing metal melt to solidify so as to form a metal foam body in a state in which it is at least temporarily under a reduced surrounding pressure that causes the introduced gas to produce foaming of the metal melt.

2. (Currently Amended) Process for producing a light metal foam body, comprising the steps of:

producing a gas-containing metal melt from light metal pressure die cast scrap that has been melted under atmospheric pressure so as to thereby introduce gas into the fluid light metal without blowing gases into the melt or using blowing agents;

then bringing the gas-containing metal melt into a mold;

allowing the gas-containing metal melt to solidify so as to form a metal foam body in a state in which it is at least temporarily under a reduced surrounding pressure, as per claim 1,
in which

at least parts of the light metal [[is]] are converted into at least one compound before melting, which emits a gas soluble in the fluid metal in the region of and/or over the melting interval of the same.

3. (Previously Presented) Process as per claim 2,

in which

the conversion of parts of the light metal takes place through contact with the gas or gas mixture.

4. (Previously Presented) Process as per claim 2,

in which

the conversion of parts of the light metal takes place through contact with aerosol.

5. (Previously Presented) Process as per claim 2,

in which

the compound emits gas(es) at a temperature of max. 250°C, preferably max. 150°C, above the melting or coagulating temperature of the metal.

6. (Previously Presented) Process as per claim 1,

in which

the light metal is magnesium or a magnesium alloy.

7. (Previously Presented) Process as per claim 1,

in which

the solidification of the fluid metal takes place under a surrounding pressure in the range of 0.03 bar to 0.2 bar.

8. (Previously Presented) Process as per claim 1,

in which

the mould is pre-heated before introducing the fluid metal.

9. (Previously Presented) Process as per claim 1,

in which

a heat-insulated mould is used.

10. (Previously Presented) Use of die-cast scrap as introduced material in a process as per claim 1.

11. (Previously Presented) Process as per claim 4,

in which

the compound emits gas(es) at a temperature of max. 250°C, preferably max. 150°C, above the melting or solidification temperature of the metal.

12. (Previously Presented) Process as per claim 11,

in which

the light metal is magnesium or a magnesium alloy.

13. (Previously Presented) Process as per claim 12,

in which

the solidification of the fluid metal takes place under a surrounding pressure in the range of 0.03 bar to 0.2 bar.

14. (Previously Presented) Process as per claim 13,

in which

the mould is pre-heated before introducing the fluid metal.

15. (Previously Presented) Process as per claim 14,

in which

a heat-insulated mould is used.

16. (Previously Presented) Use of die-cast scrap as introduced material in a process as per claims 15.